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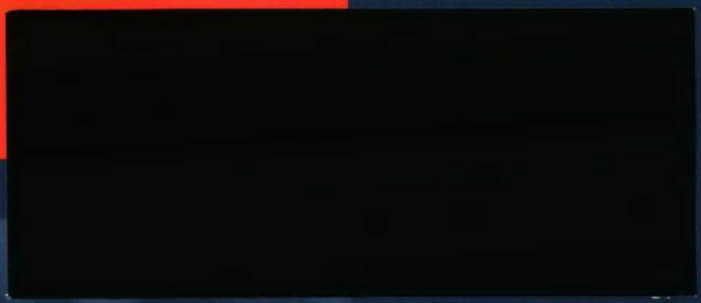

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TRUST AND DISCRIMINATION IN A SEGMENTED SOCIETY: AN EXPERIMENTAL APPROACH

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Trust and Discrimination in a Segmented Society:

An Experimental Approach[1]

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Trust and Discrimination in a Segmented Society:

An Experimental Approach

Abstract: An experimental approach is used to study ethnic discrimination within the Israeli Jewish society. Our experiment indicates that the segmented structure of Israeli society manifests itself in a consistent pattern of mistrust. In a trust game that we studied, money transferred to players of Eastern ethnic origin (Sephardic Jew) was significantly less than that transferred to players of Western origin (Ashkenazic Jew). What is surprising is that this ethnic discrimination was entirely a male phenomenon. Women, in our experiment, transferred a similar amount of money to their partners whether of Eastern or Western background; at the same time, the distribution of transfers to Eastern women was similar to that to Western women. Thus, the ethnic discrimination identified in our experiment is only **toward** male players and **by** male players. Moreover, this systematic mistrust against men of Eastern origin is common not just among Western men but **also** among Eastern men themselves. Examination of whether trust is gender-dependent showed that Western women are trusted less than Western men while Eastern women are trusted more than Eastern men. The possibility of statistical discrimination was also examined, but no evidence for such an effect was found.

Trust and Discrimination in a Segmented Society: An Experimental Approach

1. Introduction

Economic interactions are not governed solely by contractual agreements. Trust plays an important role in facilitating efficient activities. As Arrow (1972) pointed out, "virtually every commercial transaction has within itself an element of trust."[2] In a multi-country comparison, Knack and Keefer (1997) showed, that trust was associated with stronger economic performance.[3] This finding is not surprising if we think of the role of trust in promoting business, partnerships between firms, joint research ventures etc. Although trust may be important in understanding the patterns of development of different countries, it may also be useful in understanding the relationship between social segmentation and economic performance within societies. That is, trust within each group and between groups may explain the overall performance of a society, but it also may affect the relative economic achievement of each group.

One common criticism of using social variables like trust and norms of cooperation to explain economic phenomenon is the fact that they are hard to measure. Knack and Keefer (1997) employed survey indicators to measure trust in a society with the following question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" Dealing with trust within different segments of a given society, however, may be more complex than that question

[2] See also Gambetta (1988), Putman (1993) and Fukuyama (1995) for a study of the role of trust in the performance of societies and institutions.

implies, since trust may vary across groups and between groups and, therefore, one cannot speak about "people" in general.

In this paper, we use the experimental approach in order to observe directly the trust (or mistrust) among individuals who belong to different social segments. The level of trust between groups may be viewed as a measurement of social segmentation within a society—a variable that is also difficult to measure.[4]

A study conducted by Berg, Dickhaut, and McCabe (1995) focused on trust among players in an experimental game. There are two players, A and B. Player A is given a fixed amount of money and asked to decide whether to transfer part of it to Player B. The amount transferred is tripled, and Player B may choose to repay to Player A. The subgame perfect equilibrium of this game is clearly the no transfer of money from A to B and no repayment (from B to A). This is not the outcome of the experiment, however. Berg et al.'s experiment confirmed that Player A typically sent a positive amount of money to Player B, who often returned an even larger amount. A similar, less stylized procedure was used by Fehr, Kirchsteiger, and Riedel (1993) and by Fehr, Gachter, and Kirchsteiger (1997). A similar experimental study was conducted by Guth, Ockenfels, and Wendel (1994).

In the foregoing game, there are gains to be obtained through cooperation. The efficient outcome, which maximizes the total pie, would require Player A to transfer *all* his resources to Player B (as these resources would then be tripled). The subgame perfect

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[3] See also Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) for a cross section multi-country study of trust and cooperation.

[4] One may distinguish between cultural segmentation, in which each group has a different customs and social segmentation that reflects the trust between individuals of different groups.

equilibrium, on the other hand, implies *no* transfers and thus does not at all exploit the gains from trade. The amount that Player A transfers to B serves, in such an experiment, as an indication of trust or cooperation between the two players, since the amount of money that Player A transfers to Player B is based on his(her) trust that Player B will repay at least the same amount. Thus such an experimental setup may be useful in studying trust in different societies and possible mistrust between groups in a given society.

This paper employ the trust game to study social segmentation and ethnic discrimination within the Israeli Jewish society.[5] When a society is fragmented, trust may depend on group affiliation. It is possible that such a structure leads to a pattern of systematic discrimination, in which members of one group do not trust players from other groups or even their own group's members. The Israeli Jewish society is characterized by an ethnic structure that is based primarily on country of origin. The two major ethnic groups are Western Jews (immigrants from Europe and America and their Israeli-born offspring) and Eastern Jews (immigrants from Asia and Africa and their Israeli-born offspring).[6] There are persistent economic gaps between the two segments. Western

[5] Clearly an important and heated segmentation in Israeli society is that between Arabs and Jews, but we leave this issue for future research. Another important segmentation in the Israeli Jewish society is that between secular and Orthodox Jews. This latter segmentation is reflected in Israel political life, in which each group has its own political party or faction in the Israeli parliament (Knesset).

[6] The terms Eastern and Western Jews are the politically correct ways to denote the more familiar definition of Sephardic and Ashkenazic Jews. It is interesting to observe, however, that the largest country of origin among the Western Jews is Poland and the former Soviet Union while the largest country of origin among the Eastern Jews is Marocco. A short glimpse at the map reveals that Marocco is clearly west of Poland.

immigrants achieve higher levels of education and earnings than do Eastern immigrants, and these gaps continue to prevail among for second-generation immigrants.[7]

Our experiment indicates that the segmented structure of the Israeli society indeed manifests itself in a consistent pattern of mistrust. Specifically, in the trust game that we studied, the amount of money transferred to players of Eastern ethnic origin was significantly *lower* than that transferred to players of Western origin. What is surprising is that this pattern of ethnic discrimination was entirely a male phenomenon. Women, in our experiment, transferred the same amount of money to partners, whether men or women, or of Eastern or Western background. We did not find any evidence of ethnic attachments among women.[8]

Are women discriminated against? The answer to this question depends, again, on ethnic affiliation. In our experiment, Western women received lower money transfers than did Western men. On the other hand, Eastern women received larger transfers than do Eastern men. What is surprising is that the distribution of transfers to Eastern women was similar to that to Western women. Thus, the ethnic discrimination identified in our experiment was manifested only with respect **to** male players and **by** male players. This systematic discrimination against men of Eastern origin, moreover, was common not just among Western men but **also** among Eastern men who discriminated against Eastern men. The distribution of transfers by male players, Eastern and Western, to the different

[7] For an extensive discussion of the gaps in Israeli society, see, for example, Cohen and Haberfeld (1998), Eisenstadt (1985), Mark (1994), Semyonov and Kraus (1983), Semyonov and Lerenthal (1991), and Shavit (1984).

[8] The comparison of behavior according to gender has a long tradition in the social sciences. See, for example, Bolton and Katok (1995), Andreoni and Vesterlund (1997), Eckel and Grossman (1997), and for a recent survey of this literature, Eckel and Grossman (1998). The main finding of this literature is that

types of partners was similar. Therefore, in our experiment, we found no difference in the behavior of the two ethnic groups, while there was a striking difference in the behavior of the two genders.

Whenever certain individuals or groups are treated differently, one of the immediate questions is whether such discrimination has a market-base explanation or it just reflects the taste for discrimination (see Becker, 1957). For example, one can justify a different health insurance premium for smokers, as smoking affects health. This type of discrimination is denoted as statistical discrimination (see Arrow, 1973, 1998). That is, if individuals of different ethnic affiliations respond differently in the trust game, one can argue that the discrimination between them is rational. We therefore examined the response of students who played the role of Player B. No evidence was found that a male/Eastern player sent back an amount that differed from that of a male/Western player. It is possible, however, that players' discrimination according to ethnic origin of their partners is based on ethnic stereotypes that affect the players' assessment about the likely respond of their game partner and that these stereotypes are incorrect. On the other hand a possible alternative explanation is that the unfavorable treatment of male/Eastern players is only motivated by the players' prejudice who consequently forego some of the profits that can be made in the experiment. Thus the discrimination that we identified satisfy the definition of discrimination given by Becker (1993), who argued that "discrimination in the marketplace consists of voluntarily relinquishing profits, wages, or income in order to cater to prejudice."

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men are more selfish than women. In the economics literature, however, the findings are far less conclusive and appear to depend strongly on the context of the study.

The literature describes two methods for testing discrimination: regression analysis and audits.[9] Most of the research deals with discrimination in consumption and labor markets, as these variables are formally registered. The regression method is indirect, whereas the audit method uses a matched-pair survey that allows researchers to observe behavior directly (see, for example, Ayres and Sigelman, 1995).[10] Our method, while different from the two aforementioned techniques, is similar in approach to the audit method, as it tries to obtain a direct observation of behavior. This paper concentrates on discrimination with respect to trust, a variable that is difficult to quantify but yet very important in our daily life. How can we quantify the trust that a bank loan officer has in different clients, or the trust that people put in their doctor, lawyer, or in any other expert?

The subject of discrimination is sensitive and controversial in any society, but this does not imply that we should avoid studying and discussing it. We do, though, emphasize that what we report in this paper is the outcome of an experiment that captures one form of discrimination; the results cannot automatically be generalized to different strategic situations. On the other hand trust may be instrumental in explaining earning gaps between different groups in a society. Our finding is consistent with the observation that the ethnic earnings gaps in Israel among women are indeed smaller than are among men and that in recent years Western men have increased the earnings gap between them and other groups (see Cohen and Haberfeld, 1998).

[9] See the special Symposium issue on Discrimination in Product, Credit and Labor Markets that appeared in *The Journal of Economic Perspective* (1998) and the following papers in this symposium: Yinger (1998), Ladd (1998), Darity and Mason (1998), Arrow (1998), Heckman (1998) and Loury (1998).

2. Short background of Eastern and Western ethnic groups in Israel

In 1948, when the state of Israel was established, there were 600,000 Jews in Israel, most of them of Western origin. From then to 1952, the Jewish population of the country more than doubled as a result of a massive immigration of 700,000 Jews. About half of these immigrants were Western (survivors of the Holocaust); the other half were Eastern Jews. Immigration after 1952 continued, but at a slower pace. Yet, 55% of the immigrants during the slow period were Eastern Jews. The ethnic division of the immigrants changed dramatically in the 1990's with the massive immigration of Jews from the former Soviet Union.

The persistent social and economic gaps between the two ethnic groups have been the subject of extensive research (e.g.: Amir, 1987, Cohen and Haberfeld, 1998, Haberfeld, 1992, Mark, 1994, Semyonov and Kraus, 1983, and Semyonov and Lerenthal, 1991). The main findings of these studies is that the gaps have not been closing over time. Moreover, the (education and earning) gaps between second-generation immigrants are not smaller than these found among first-generation immigrants. The earning gaps are attributed, in these studies, mainly to schooling gaps, and not to discrimination in the labor market. Looking at some descriptive statistics of second-generation Jewish immigrants in Israel (see Cohen and Haberfeld, 1998), one can find that in 1992, for instance, the percentage of men of Western origin with a college degree (or more) was 41.4% while for men of Eastern origin was 11.1% (the percentages for women were very

[10] This method was criticized by Heckman (1998), who claimed "The audit method can find discrimination when in fact none exists; it can also disguise discrimination when it is present."

similar). The mean annual earning of men of Eastern origin that year was only 67.7 percent of that of men of Western origin (among women, the gap was about 20%).

3. Experimental procedure

The participants in this experiment were 966 undergraduate Israeli students. One group of players consisted of students from the University of Haifa and the Academic College of Tel Aviv. All participants came from large (at least 70 students in class) mandatory courses. Using name lists, we chose students from economic courses in these universities with typical ethnic names:[11] 122 names of Western males, 135 names of Eastern males, 118 names of Western women, and 108 names of Eastern women (483 in total). These students played the role of Player B. The second group of players were undergraduate students from Tel Aviv University. These students, recruited in their classes, played the role of Player A. To ensure against biases, the matching between students was done randomly, such that in any class of students the participants were from all four groups (western males, eastern males, western females, and eastern females). Furthermore, all sessions were conducted by the same experimenter.

The instructions are presented in Appendix 1. The students who played as Player A were told that the experiment was being constructed in pairs and that they had already been matched with another student from another university. The name of the person with whom they were matched was written (in ink) at the bottom of the sheet of paper they received.

[11] Many of the family names in Israel provide a good signal for ethnic affiliation, a fact well recognized by most of the population.

Player A was then told that (s)he would receive NIS 20[12] and that his/her partner (Player B) would not receive any amount. Player A was asked to decide if (s)he wanted to transfer any amount of the NIS 20 to Player B, and if so how much. The players were told that the amount transferred would automatically be tripled and that the Player B with whom they were matched would be informed in few days about all the details of the game, including the amount that Player A transferred to him/her. Player B was then asked to decide whether (s)he wanted to send any amount of the money (s)he received (three times the sum allocated by Player A) back to Player A. This amount would not be tripled.

The students were told that this last transfer ended the experiment, and that we would come to their classes one week later to pay them. The Player A students were then asked to write their names and the amount they wanted to send to Player B. In the second stage of the experiment, the students from the University of Haifa and the Academic College of Tel Aviv were approached in their classes and told that we used the list of names of the course participants, and that only some of the students were needed for the experiment (though they were not told of the rule according to which the names were chosen). The names were then called aloud, and the forms handed to the respective students. The students in the role of Player B were given exactly the same description of the experiment. They were also told the names of Player A with whom they were matched, and the amount (s)he had decided to send them. After deciding on the amount they wish to give back, they were paid privately and in cash.

[12] At the time of the experiment, $1=NIS 3.6.

After making his/her choice, each participant was asked to fill out a questionnaire. The questions we were most interested in were the participant's gender and the birth place of his/her parents. This type of questions is not unusual in formal forms in Israel.

Table 1 presents the number of pairs that were matched according to gender and ethnicity. [13]

PLAYER B

PLAYER A	IM	WM	EM	IF	WF	EF	Sum
WM	31	23	15	23	16	14	122
EM	27	28	18	28	17	17	135
WF	22	22	21	23	14	16	118
EF	27	14	18	21	15	13	108
Total	107	87	72	95	62	60	483

Table 1: Pairs of participants according to gender and ethnicity. WM refers to Western males, EF Eastern males, WF Western females, and EF Eastern females. IM and IF are "Israeli" males and females.

Note that in our procedure, each participant knows the name of the person with whom (s)he is matched and that the decisions of participants were revealed to the experimenter at the end of the experiment. This procedure is in contrast to Berg et al. (1995), who used a double anonymity procedure to ensure that no one apart from the

[13] We put all the students we were unable to classify as Western or Eastern in the group labeled "Israel" (for example, students with parents from both groups).

participant himself/herself knows his/her decision. Comparing behavior under these two procedures is interesting by itself (see, for example, Hoffman, McCabe and Smith, 1996), but beyond the scope of the current study; moreover, this issue is of less importance for the comparisons made in the current study.

4. Segmented Society

Our first task was to establish the casual observation that the Israeli society is indeed segmented along ethnic lines, not only with respect to customs and culture but, more importantly, also with respect to trust. In order to study this issue, we observed the way students who were assigned as Player A played the trust game with partners of different ethnic backgrounds. In this part of the discussion, we consider only male opponents. As will become evident later, trust depends on gender as well as on ethnic affiliation.

The two competing hypotheses we test are:

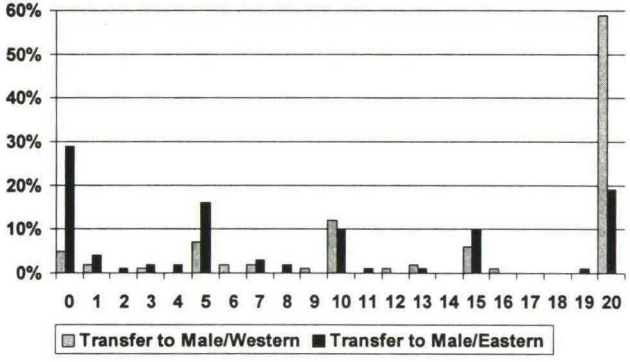
a) Israeli society is sufficiently integrated so that trust does not depend on the ethnic affiliation of players; we expect that players of Eastern and Western ethnic origin will obtain similar money transfers.

b) Israeli society is segmented, and the money transfers in the trust game will depend on ethnic affiliation.

Figure 1 describes the distribution of money transfers by Player A to Player B according to the ethnic identity of Player B. The dark (respective light) columns describe

the distribution of transfers when Player A was matched with someone with a typically Eastern (respectively Western) name. The difference between the two distributions is striking. In particular, almost 60% of the students chose the efficient transfer (transferring the whole pie) when their opponent was of Western origin, but only almost 20% did so when they faced an opponent of Eastern origin. Figure 1 tells us the whole (sad) story of social segmentation within Israeli society.

Figure 1: Transfer to male players



Observation 1: Israeli society is (strongly) segmented, reflected in part by the fact that trust depends on ethnic stereotypes. In the game, money transferred to players with a typical Western name was higher than the amounts transferred to students with typically Eastern names. Specifically, the average amount transferred to a Western male partner

was 15.15 whereas the average amount transferred to an Eastern male partner was 8.06 (or about 53% of the average transfer to Western male partners). A two-way analysis of variance reveals that this difference is significant [$F(1, 256)=61.64$, $P<.00$].[14]

Up to now we have examined the behavior of the general student population. Now that we have established that trust may be affected by the ethnic affiliation of the game partners, we will turn to an examination of the pattern of trust (or mistrust) between the different groups in the Israeli society.

5. Gender and Discrimination

The pattern of trust and discrimination may depend not only on ethnic affiliation but also on gender. There are two separate but related questions when considering the "gender effect." The first is: Are women trusted less, or more, than men, and does the level of trust depends on their ethnic affiliation? The complementary question is: Do women themselves discriminate between Western and Eastern players the same way as men do?

5.1 Trusting women:

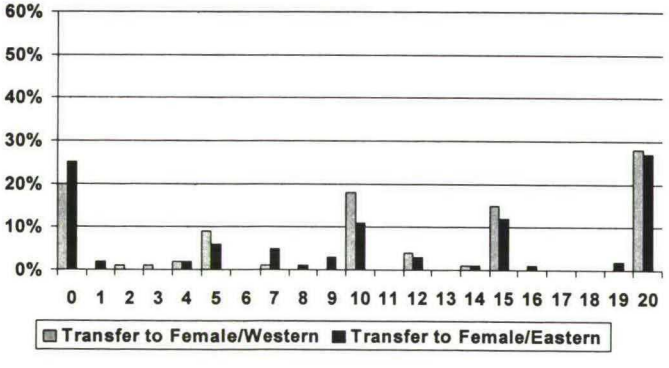
For the first question, we study the trust game in which students who played the role of Player A were matched with players B who had female names.

[14] In the text, we report the results of the ANOVA test. Although this is the standard analysis, some of its assumptions (such as the normality assumption) are problematic in our data. For that reason, we also report, in the Appendix, the results of the nonparametric Mann-Whitney U test based on rank. We wish to emphasis that the results of the two tests with our data was similar in all cases.

The average transfer to female players in this experiment was 10.63, which is **similar** to the average transfer to male players, 11.42, that was reported in the previous section. This difference is insignificant [$F(1, 478)=.1.58$, $P>.05$)]. Thus, an examination of the transfers to players of a different gender did not reveal any pattern of discrimination based on gender. This conclusion, however, may be misleading, as we need to examine the gender/ethnic combination.

Figure 2 describes the distribution of transfers to female players based on their ethnic background. The average of transfers to female partners with typical Western names is 11.02, while the average transfers to female partners with typical Eastern names is 10.41. These two averages are similar, as is also evident from looking at Figure 2. The difference is statistically insignificant [$F(1,222)=.352$, $P>.05$)].

Figure 2: Transfer to female players



Observation 2:

a) We found no evidence for ethnic discrimination between women.

b) The average transfer to women of Western origin is 11.02, whereas that to men of Western origin is 15.15. Comparing the two distributions (see also Figures 1 and 2) leads to the conclusion that women of Western origin are trusted **less** than men of Western origin. The difference is highly significant [$F(1, 238)=19.78$, $P<.00$)]. On the other hand, the average transfer to women of Eastern origin is 10.41 while the average transfer to men of Eastern origin is 8.06. The conclusion derived from the distributions of transfers is that women of Eastern origin are trusted **more** than men of Eastern origin [$P(1, 240)=5.57$, $P<.019$)].

Trust may be an important factor in determining wages. It is, therefore, interesting to observe that the ethnic earnings gaps in Israel among women are indeed smaller than are those among men (see Cohen and Haberfeld, 1998); in recent years, in fact, Western men have increased the earnings gap between them and the three other groups (Western women, Eastern men, and Eastern women).

It is interesting to note that the above result is consistent with some of the early studies on discrimination of black women in the USA. For example Epstein (1973) pointed out that, although one may expect that being a black woman (double subordination) may lead to a more severe discrimination, it may actually result in a relative advantage.

5.2 Do women and men discriminate in the same way?

After discussing the behavior *toward women*, we now turn to a discussion of the behavior *of women*--that is, the way women play the trust game when they are assigned to play Player A--and compare it to the way men play this game. In this part of the discussion, we consider only the cases in which Player B was a male player. (Note that the previous Section 5.1 did not find any evidence for discrimination between women of different ethnic backgrounds.)

Figure 3a describes the money transfers by men (Player A) on the basis of the ethnic affiliation of their opponents (Player B). This distribution of transfers was contrasted with the transfers of female players, depicted in Figure 3b.

Figure 3a: Transfer from Male to Male/Western and Male/Eastern

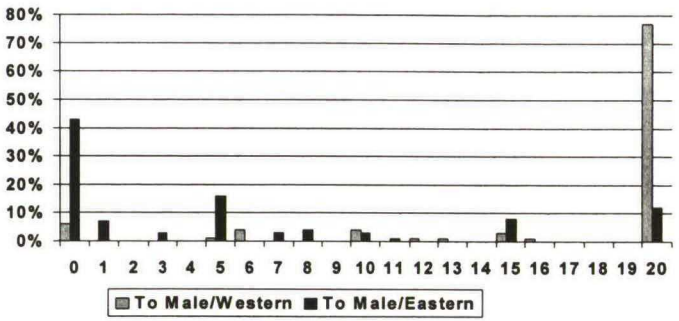
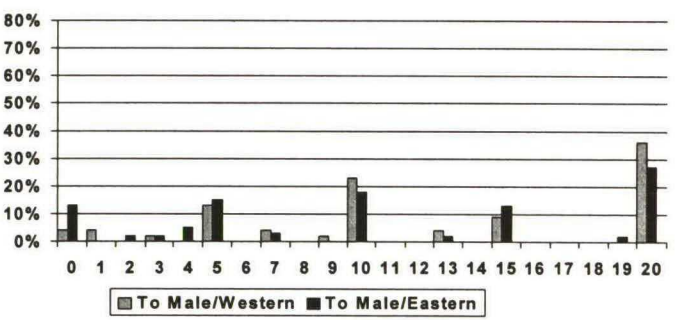


Figure 3b: Transfer from female to Male/Western and Male/Eastern



The comparison of Figure 3a (the money transfers by male players) with Figure 3b (the money transfers by female players) is striking: Men respond strongly to ethnic stereotypes, whereas it seems that women disregard them.

Specifically, the average amount that was given by women to male players of Eastern background was 10.94, whereas the average amount transferred by women to male players of Western origin was 12.53. The difference between these numbers is insignificant [$F(1, 113)=1.48$, $P>.05$)]. By contrast, the average transfer made by male players to male players of Eastern background was 5.62, whereas the average amount that men transferred to male players of Western origin was 17.16. That is, the average transfer to male Western players was about three times that to male players of Eastern origin. The difference between the numbers, furthermore, is significant [$F(1, 140)=101.3$, $P<.00$)]. Also, an examination of the outcomes of the game in which women played with other women yields that the average transfer to Western women was 11.3 and the average transfer to Eastern women was 10.38. Comparing these outcomes with the above results indicates the absence of any significant difference in the amount of money that women transferred with respect to gender.

Observation 3: (i) We found no evidence that women's trust in their game partners is based on ethnic stereotypes or on gender.[15]

(ii) Men's trust in male players of Western origin is *higher* than women's trust in such players. On the other hand, men's trust in male players of Eastern origin is *lower* than is women's trust in such players.

[15] It was common knowledge in our experiment that all the players are students. It is possible that the ethnical pattern of trust and mistrust also depends on the education level of the game partners. Thus our experiments indicates that women do not discriminate according to ethnic background when they play with educated partners. We, however, cannot extend such a behavior for the entire population of possible partners.

6. Trust among segments: Systematic discrimination

The results presented in the previous sections do not necessarily imply the existence of *systematic discrimination* against a particular ethnic group. Previous studies have shown that even an arbitrary group affiliation may affect the way people treat others.[16] The group bias implies that people treat members of their own group more favorably than they treat other people. Thus it is possible that the differences in trust reported in Section 4 reflects a group bias. Players trust members of their own ethnic group; if there were more students of Western background in the population that we studied, then the outcome that students of Western origin received greater money transfers is not surprising.

In order to check for systematic mistrust or discrimination against one particular ethnic group, we modified our experiment by taking into account the ethnic affiliation of the students assigned to be Player A. This was done by asking them (after they had played the game) to fill out a short questionnaire in which one of the questions asked for the country of birth of their parents.[17] Given this information, we were able to distinguish between the different ethnic/gender groups of students who participated in the experiment. Following our observations in Section 5, we concentrate in this section on studying the behavior of male players toward male opponents. The population of male students who took the role of Player A was divided into three groups according to the

[16] See Tajfel (1982), Tajfel and Turner (1979), Taylor and Moghaddam (1987), and Turner, Brown, and Tajfel (1979).

[17] Identifying ethnic affiliation is not viewed as an unusual information request in many forms that a typical Israeli student has to fill out throughout his/her years of study.

place of birth of their parents (Israel, Western, and Eastern). Figure 4a and 4b summarize the findings.

Figure 4a: Transfer to Male/Western by males according to origin

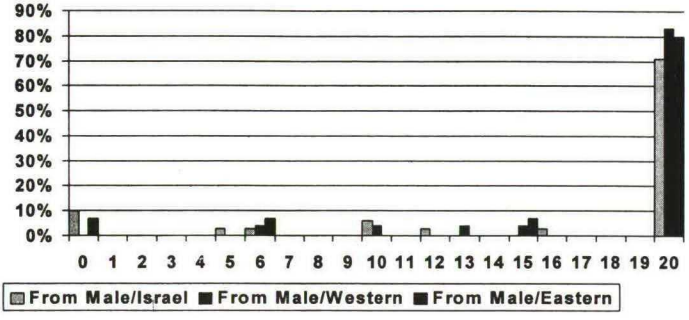


Figure 4b: Transfer to Male/Eastern by males according to origin

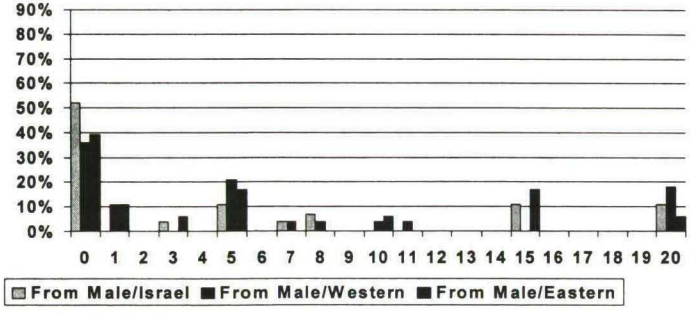


Figure 4a and 4b show that the pattern of mistrust toward male players of Eastern origin is common to **all** types of (male) players. The average transfer of male/Eastern, male/Western, and male/Israel players to male/Western players was 17.4, 18.43, and 16.1, respectively. We found no statistically significant difference between these transfers. The average transfer to male/Eastern players was 5.28, 6.04, and 5.41, respectively. Again, we found no statistically significant difference between the transfers.

Observation 4: A *systematic mistrust* of men of Eastern origin is found to be common among men of different ethnic origins. In particular, this pattern of mistrust **also** characterizes men of Eastern origin, who discriminate against members of their own group.

We do not provide in the paper any explanation to this phenomena. It seems however to us that, as part of a cycle of prejudice and discrimination, and as a reaction to their inferior status in the society, eastern jews come to believe in these stereotypes themselves.

7. Is Discrimination Rational?

This last section discusses the possibility of having statistical discrimination in our experiment. One possible explanation of the discrimination identified in our experiment is that indeed people of different ethnic background respond differently as player B. In such a case ethnic discrimination may be rational and not a reflection of

some "taste for discrimination" (for a discussion on this issue see Becker, 1957, and Arrow, 1973). To test for this, the reaction of Players B (i.e., the amounts they transferred back to Player A) was examined to see if a consistent difference based on ethnic affiliation characterized their response. Clearly the decision by Player B on the amount (s)he transfers to Player A depends on the amount that had been transferred to him/her in the first place. The averages of these amounts cannot be examined, as we know already that players B of different ethnic origins received different amounts. This comparison, then, may be done only with students who received the same amount from Player A. There are enough observations to compare male students of different origins who received NIS 5, 10, 15, or 20.

Amount given by Player A	5	10	15	20
Average sent back by Western male	1.8	13	17.2	24.3
Average sent back by Eastern male	2.8	14.2	16.7	23.1

Table 1: Average amount sent back by males according to ethnic background and the amount they received from Player A. All differences reported in this table with respect to the amount received by Player B are insignificant at a .5 level of significance.

Observation 5: We found no evidence for statistical discrimination. That is, we found no evidence that a male/Eastern player sent back an amount that differed significantly from that returned by a male/Western player.

8. Concluding remarks

This paper identified one specific pattern of ethnic discrimination in Israeli society: members of one ethnic group were trusted less than were members of another ethnic group. It is important to emphasis that this conclusion was derived by examining only one specific game experiment. In real life, of course, there are many forms of trust. Since our experiment captured only one form, we do not wish to extend our conclusions beyond the scope of similar strategic situations.

An important distinction between the different forms of discrimination is the level of observability. Earnings and education, which have been the focus of most studies, are variables for which data may be observable. An important aspect of discrimination deals, however, with interpersonal relations which are much more difficult to observe. If we are to devise public policies that are aimed at correcting for discrimination, it would probably be easier to implement such policies when the cases of discrimination are observable. When we consider trust and cooperation affected by ethnic affiliation, these forms of discrimination are not observable. We can legislate that wages and school admission should not be dependent on ethnic background or gender, but how can we legislate trust?

It is important to note that the population that we studies consisted only of students. The behavior of this group does not necessarily represents the entire Israeli Jewish population. The fact, however, that there is such strong evidence of systematic discrimination among university students, a group that is relatively educated and young, indicates a segmented society, in which groups are subject to discrimination.

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Appendix A: **Instructions for Player A** (translated from Hebrew)

Welcome to this experiment in decision-making. In this experiment, you may earn some money that will be paid to you, privately and in cash, at the end.

The interaction in the experiment will be in pairs. You are called Student A and the student you are matched with is called Student B. The participants in the role of student B are from the University of Haifa.

At the beginning of the experiment you will receive NIS 20 and student B will not receive any money. You are asked to decide whether you want to send any amount of this NIS 20 to the student you are matched with; and if so, how much. We will triple the amount you send and give it to student B; that is, for every NIS 1 that you send, student B will receive NIS 3.

In a few days from now, we will ask student B to decide if (s)he wants to send back to you any amount of the money (s)he received (three times what you sent); and if so, how much. This amount will not be tripled.

This will end the experiment, and the money will be paid.

Name of the student you are matched with (Student B):_____

Your name:_____

Amount of money you want to send to student B:_____ (Please remember that this amount should be between NIS 0 and NIS 20.)

Appendix B: **Results of the Mann-Whitney *U*-test based on ranks**

As argued in the text, although ANOVA is the standard test in such studies, some of the tests' assumptions, most notably the normality assumption, are not fulfilled by our data. To support the statistical analysis, therefore we also conducted a non-parametric test. As it turns out, the two tests result in similar conclusions based on our data. The results of the non-parametric test are given below in an order corresponding to the order of the ANOVA test reported in the paper.

Comparison of	*Z*	*P* <
Transfer to Western Males / Eastern Males	7.363	.000
Transfer to Males / Females	1.390	.164
Transfer to Western Females / Eastern Females	.682	.527
Transfer to Western Males / Western Females	4.672	.000
Transfer to Eastern Males / Eastern Females	2.073	.038
Transfer from Females to Western Males / Eastern Males	1.288	.198
Transfer from Males to Western Males / Eastern Males	7.904	.000

Table A1: Results of the non-parametric test

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98119	R. Nahuis	The dynamics of a general purpose technology in a research and assimilation model
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